

**Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services**

STATEMENT OF BASIS

**Williams Olefins LLC
Williams Olefins LLC - Geismar Ethylene Plant
Geismar, Ascension Parish, Louisiana
Agency Interest Number: 5565
Activity Number: PER20070005
Proposed Permit Number: 0180-00029-V8**

I. APPLICANT

Company:

Williams Olefins LLC - Geismar Ethylene Plant
5205 Hwy 3115
Geismar, Louisiana 70734

Facility:

Williams Olefins LLC
5205 Hwy 3115
Geismar, Ascension Parish, Louisiana
Approximate UTM coordinates are 687.60 kilometers East and 3345.90 kilometers North, Zone 15

II. FACILITY AND CURRENT PERMIT STATUS

The Geismar Ethylene Plant currently produces about 1,300 million pounds of ethylene along with other associated hydrocarbon products. It is currently operating under Permit No. 0180-00029-V7, January 11, 2006.

III. PROPOSED PROJECT/PERMIT INFORMATION

Proposed Permit

A permit application and Emission Inventory Questionnaire was submitted by William Olefins, LLC on August 10, requesting a Part 70 operating permit renewal and modification for the Geismar Ethylene Plant. Additional information dated November 11, 2007, was also submitted.

Project Description

This permit will reconcile and revise the Specification of NOC Fugitive Emissions based on updated process stream composition data, the CO emission from the Flare System based on an AP-42 emission factor, and the emission estimates for VOL Storage Tanks per the most recent EPA protocol and software program. Additionally, three sources will be added to Insignificant Activities.

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Estimated emissions in tons per year are as follows:

Pollutant	Before	After	Change
PM ₁₀	146.36	146.36	-
SO ₂	157.44	157.44	-
NO _x	928.51	928.51	-
CO	374.05	459.65	+85.60
VOC	274.63	274.62	-0.01

VOC LAC 33:III. Chapter 51 Toxic Air Pollutants (Tons Per Year)

Benzene	7.63
Butadiene	5.20
Ethylbenzene	0.18
Methanol	1.42
Naphthalene	0.43
Styrene	0.96
Toluene	1.52
Xylene	0.26
Total	17.60

IV REGULATORY ANALYSIS

This permit was reviewed for compliance with 40 CFR 70, the Louisiana Air Quality Regulations, New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP). Compliance Assurance Monitoring (CAM) and Prevention of Significant Deterioration (PSD) regulations do not apply.

Louisiana Air Quality Regulations and NSPS

The applicability of the appropriate regulations is straightforward and provided in the Facility Specific Requirements Section of the draft permit, or Table 2 of the Air Permit Briefing Sheet. Similarly, the Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions and standards are provided in the Facility Specific Requirements Section of the draft permit, or explained in Table 2 of the Air Permit Briefing Sheet.

Prevention of Significant Deterioration Applicability

This permit is a renewal/reconciliation and there are no actual emission increases. Therefore, PSD and Non-Attainment New Source Review do not apply.

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MACT Requirements

{Insert MACT requirements and analysis here.}

Air Quality Analysis

{Insert air quality analysis and results here, if required.}

General Condition XVII Activities

The facility will comply with the applicable General Condition XVII Activities emissions as required by the operating permit rule. However, General Condition XVII Activities are not subject to testing, monitoring, reporting or recordkeeping requirements. For a list of approved General Condition XVII Activities, refer to the Section VIII – General Condition XVII Activities of the proposed permit.

Insignificant Activities

All Insignificant Activities are authorized under LAC 33:III.501.B.5. For a list of approved Insignificant Activities, refer to the Section IX – Insignificant Activities of the proposed permit.

V. PERMIT SHIELD

{If a permit shield is included in the proposed permit. Indicate the permit shield here: Per 40 CFR 60.6(f) and LAC 33:III.507.I, permit shields have been determined for the proposed permit. The details of the permit shield are given in the Permit Shield section of the proposed permit.}

VI. PERIODIC MONITORING

{Insert the periodic monitoring requirements here.}

VII. GLOSSARY

Carbon Monoxide (CO) – A colorless, odorless gas, which is an oxide of carbon.

Maximum Achievable Control Technology (MACT) – The maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III.Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

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Hydrogen Sulfide (H_2S) – A colorless inflammable gas having the characteristic odor of rotten eggs, and found in many mineral springs. It is produced by the reaction of acids on metallic sulfides, and is an important chemical reagent.

New Source Review (NSR) – A preconstruction review and permitting program applicable to new or modified major stationary sources of air pollutants regulated under the Clean Air Act (CAA). NSR is required by Parts C (“Prevention of Significant Deterioration of Air Quality”) and D (“Nonattainment New Source Review”).

Nitrogen Oxides (NO_x) – Compounds whose molecules consist of nitrogen and oxygen.

Organic Compound – Any compound of carbon and another element. Examples: Methane (CH_4), Ethane (C_2H_6), Carbon Disulfide (CS_2)

Part 70 Operating Permit – Also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507. Major sources include, but are not limited to, sources which have the potential to emit: ≥ 10 tons per year of any toxic air pollutant; ≥ 25 tons of total toxic air pollutants; and ≥ 100 tons per year of regulated pollutants (unless regulated solely under 112(r) of the Clean Air Act) (25 tons per year for sources in non-attainment parishes).

PM_{10} – Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.

Potential to Emit (PTE) – The maximum capacity of a stationary source to emit any air pollutant under its physical and operational design.

Prevention of Significant Deterioration (PSD) – A New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.

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Sulfur Dioxide (SO₂) – An oxide of sulfur.

Sulfuric Acid (H₂SO₄) – A highly corrosive, dense oily liquid. It is a regulated toxic air pollutant under LAC 33:III.Chapter 51.

Title V Permit – See Part 70 Operating Permit.

Volatile Organic Compound (VOC) – Any organic compound, which participates in atmospheric photochemical reactions; that is, any organic compound other than those, which the administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.